



Name \_\_\_\_\_



## PARTS OF A PEDIGREE

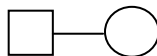
Many characteristics of humans and animals follow the patterns of inheritance we have studied. Understanding patterns of inheritance allows geneticists to predict the kinds of offspring that are likely to result from different crosses. The ability to make accurate genetic predictions is important to plant and animal breeders as well as to genetic counselors who advise people.

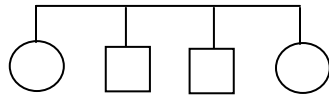
The following diagrams are examples of **pedigrees**. A pedigree is a diagram that follows the inheritance of a single trait through several generations in a family. Here are some standardized symbols used in constructing pedigree diagrams. You should become familiar with each symbol.

 = Male

 = Female


 or  indicates that the individual shows the trait being studied


 marriage/mating

 offspring in order of birth,  
from left to right

Questions:

When reading a pedigree . . .

what does  represent? \_\_\_\_\_

what does  represent? \_\_\_\_\_

what does  represent? \_\_\_\_\_

what does  represent? \_\_\_\_\_

what do vertical lines represent? \_\_\_\_\_

what do direct horizontal lines represent? \_\_\_\_\_

what do “brackets” represent? \_\_\_\_\_

Use the information you learned about the parts of a pedigree, as well as dominant and recessive alleles, to study the diagrams and answer the questions.

Figure 1 illustrates the inheritance of straight and curly hair in three generations of a human family. Straight and curly hair are two forms of a trait. Curly hair is dominant and straight hair is recessive.

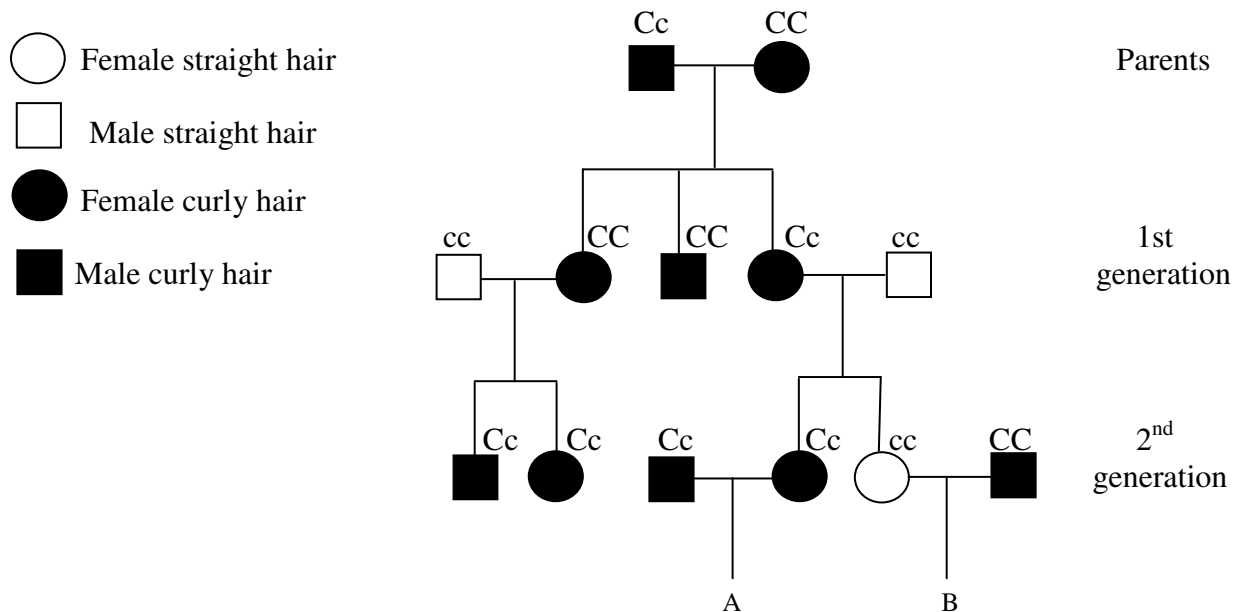


Figure 1

- 1 a. How are the parents alike?
- b. How do they differ?
2. Is it possible for the parents to have a child in the 1<sup>st</sup> generation with straight hair? Why or why not?
3. What are the possible genotypes for child A?
4. What are the possible genotypes for child B?
5. If child B is a girl, what would her symbol look like? (circle or square AND shaded or white)